

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Jamestown Powder Coatings, Inc.

Ohio Manufacturing Extension Partnership

Jamestown Powder Coatings Develops Dust Collection System Design

Client Profile:

Jamestown Powder Coatings, Inc. (JPC) is a small manufacturer specializing in production of limited runs of finely ground plastic resins for the powder coating market. JPC has captured a niche market for the production of limited quantities of specific formulations for its customers that the large powder producers are unwilling to produce. Located in Columbus, Ohio, the company employs less than 20 people.

Situation:

JPC mixes fine resin powder and grinds plastic resins to produce its powder coatings. Both of these processes result in the generation of fugitive dust emissions that, uncaptured, drifted throughout the entire facility. A key potential customer performed an audit on the facility and made a note of the amount of dust. This dust can have a severe effect on the quality of the final product, not to mention impacting employee comfort levels. The company elected to install a dust collection system. JPC contacted the Manufacturing Resource Office (MRO), a NIST MEP network affiliate, to assist in the design of a dust collection system.

Solution:

MRO took measurements of the facility and identified six specific pickup points. Using American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) standards for air duct system design, MRO completed a duct CAD layout and determined that a smaller dust collector could be used by installing valves at each pickup point. These valves would only be opened when needed, thus reducing the amount of net air flow in the system. By using the smaller dust collector, the system's cost was reduced by 50 percent. Installation of the dust collection system and a good overall plant cleaning dramatically reduced the amount of fugitive dust and will have a strong impact on product quality. In addition, JPC won the new business and experienced a dramatic increase in sales as a result.

Results:

Designed a new dust collection system to improve product quality and employee safety.

Saved 50 percent in system costs.

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Increased sales by \$400,000.

Testimonial:

"The work done by the Manufacturer's Resource Office helped capture a new \$400,000 a year customer."

Kevin Biller, President